The Spark Gap

NOVEMBER 1985

Book X Vol XI

Official Journal of the Wellesley Amateur Radio Society

President's Message

by Tom Kinahan, N1CPE

Thanks go out this month go out to en McNair, N1DEZ; Larry Leblanc, WA1MWF; Dick Weissel, WA1HRV; Thomas Burton, KX1H; and Art Thompson, KA1ENP for helping to get up the club vertical. A little more tuning has yet to be done for 75 meters, but it works nice, come on down and operate. If you want to, get in touch with an officer and we'll make sure you can get into the Red Cross to operate.

Thanks also to Bob Drapeau; KT1K for an excellent job organizing the Simulated Emergency Test.

Thanks to all those participating in the Wellesley Veterans Parade: Scott Nacey, WA1YOJ; Art Thompson, KA1ENP; Rita Baker, N1DDI; John Schide, WB1BUV; C.J. McDonald, WB1BUM; and Ken McNair, N1DEZ.

Thanks to Dick Weissel, WA1HRV for picking up the new club vertical that will be mounted on the roof of the garage in the back of the Red Cross.

Thanks to Ken McNair, N1DEZ for taking down the old Maugus Hill receive site antennas and radio system. Plans are in the works for using this equipment at the present repeater site and some for a remote western receive site for the repeater.

For all you packeteers out there, check out the KT1K-1 digipeater at Babson College. Send reports of coverage to Bob, KT1K.

Our next club weekend project will be to get the seperate receive antenna up at the Newton - Wellesley Hospital. We have the equipment, so we just need the time and the help.

Did anybody catch the EMass section Simulated Emergency Test? On Saturday, October 19, Barry Porter, KB1PA, the EMass Section Emergency Coordinator sent a test message to all EMass Amateurs. He asked that all Amateurs hearing the message originate a formal message back to him reporting the time you heard the message and a code word. Did you hear it? Did you respond?

Also, don't forget that Sweepstakes is coming up in the middle of this month. If you would like to join in with the other people who will be operating W1TKZ during the phone weekend, contact me.

ANNOUNCEMENT

The program at our second meeting this month, November 21, will be on the subject of DX. Roger Smith, W1EOA, has arranged for Genevieve Dionne, N1CPC, to appear that evening. With the assistance of OM Jim, K1MEM, she will give a slide show presentation on a DXpedition to the Dodecanese, SV5. Should be an interesting program.

MEETINGS THIS MONTH:

November 7, 1985, at 7:30 p.m.
November 21, 1985, at 7:30 p.m.
211 Washington St., Wellesley

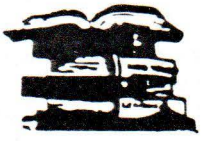
"New Tickets"

Vern Valero's recent upgrade has now brought him a new callsign, with N1DSZ replacing KA1MZJ. Congratulations Vern!

NEW CLUB MEMBERS

This month we would like to welcome several new people to the club. First we have Kathy Pate, KA1IYR, of Dover. Kathy recently helped give the ham-in-space presentation at the club. Also welcome to Lawrence Leblanc, WA1MWF, of Needham who joined at a recent meeting. Finally, welcome to Gary Irving, KA1HDR, of Newton. Hope you will all enjoy you membership in WARS.

education corner



Vern Valero, N1DSZ, has a copy of the ARRL General/Technician license manual that he will give to anyone who is serious about making the upgrade. Come and get it at the next club meeting.

Dues Dues Dues...

Your club dues are now overdue! Time is quickly running out. To keep your membership current, send your $10.00 dues to treasurer C.J. McDonald, 48 Hale Street, Newton, Mass. 02164. Do it today!

Hamnews

Anti-radio reception bills are now being introduced in Congress. The "Electronic Communications Privacy Act of 1985," sponsored by Representative Robert Kastenmeier (D-Wisconsin) and Senator Patrick Leahy (D-Vermont) would extend current wiretapping laws to any conceivable mix of medium and message.

The proposed legislation would make it illegal to pick up any signals other than conventional radio and TV programs, distress calls, police, fire, Amateur, CB and so called "walkie-talkie" transmissions.

(No definition has yet been given to this latter category.)

It is not yet clear how the bill will affect members of the Amateur Radio Service. Although the proposed law allows anyone to listen in on Amateur transmissions legally, auto-patch calls could conceivably be protected from "eavesdropping" because the calls, themselves, are connected via wire-line networks.

Others that would be affected are the owners of home satellite receiving gear and MDS downconverters. No exemption for either device is included in the proposed law. Tnx KC5CW.

Westlink Report, October 4, 1985

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The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

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THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, FCC RULES AND REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES TO THE EDITOR. ITEMS PRINTED IN THE "SPARK GAP" MAY BE REPRINTED BY OTHER AMATEUR RADIO PUBLICATIONS PROVIDED THE AUTHOR AND THE "SPARK GAP" ARE GIVEN CREDIT.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS $6.00. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
211 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181

MINUTES

Meeting of October 3, 1985:

The meeting was opened at 7:35 p.m. by President Tom Kinahan, N1CPE, with 17 present.

The Treasurer's report was given.

The Secretary's report was given.

Tom Kinahan, N1CPE, gave a report on the September ARRL VHF QSO Party.

Mort Cohan, KA1IU, gave a presentation on his MUF computer program and HF propagation in general.

We have been offered the possibility of participating in a demonstration at the Natick Mall which is being put on by a professional event organizer. After discussion it was voted 5-3 not to participate.

Tom Kinahan, N1CPE, requested volunteers for an upcoming public service event. No takers.

Mort Cohan, N1CPE, mentioned that we should watch out for heavy meteor showers and resulting VHF propagation due to the passing of a comet on October 7-8.

Bob Drapeau, KT1K, gave a report on S.E.T. results.

Mort Cohan, KA1IU, moved that the repeater have the courtesy beep permanently enabled. Passed by a 6-2 vote.

The meeting was closed at 8:38 p.m.

Hamnews

The FCC has declared a "Limited Preemption over State and Local Regulation Concerning Amateur Radio Facilities." In answer to a request for a declaratory ruling to keep local governments from enforcing laws that prevent Radio Amateurs from erecting effective antenna systems, the Commission held that there is a "strong federal interest in promoting Amateur communications."

Complete details of the ruling on PRB-1 should be in this months QST.

Westlink Report, October 4, 1985

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America's first ham in space, Dr. Owen Garriott, W5LFL, will get another hance to be part of a space shuttle crew. NASA has announced the crew assignments for Flight 61-K, which is the rescheduled Earth Observations Mission now set for launch in September, 1986. Members include Vance D. Brand as Commander and S. David Griggs as Pilot. Mission Specialists will be Robert C. Stewart, ESA astronaut Claude Nicollier and Amateur Radio's own Owen K. Garriott, W5LFL. Two payload specialists, Michael Lampton and Byron K. Lichtenberg (of Wellesley), were previouslay named to this mission. It is expected that W5LFL will seek permission to again carry an Amateur station with him on the 61-K flight, probably using gear and operating technique similar to that of Dr. Tony England, W0ORE, during the 51-F flight. Tnx K6DUE.

Westlink Report, October 4, 1985

Public Service

by Bob Drapeau, KT1K
SET Coordinator

At 4:45 p.m. on October 2nd, 1985, a shock wave hits the Wellesley Mass. area...Local hams activate a control station at the Red Cross to coordinate the evacuation of motor vehicles and medically injured.....

TRUE? Not really but it was the start of a successful Simulated Emergency Test that involved the monitoring of major traffic routes and the establishment of a landing site for Boston Med Flight. Boston Med Flight is a critical care helicopter for the transportation of seriously injured.

By 5:00 p.m. N1CPE had established Net Control at the Red Cross Building. W1TKZ began polling for check ins on our 147.03 repeater. A beacon was also activated on Packet.

KA1NEP took post at the Wellesley Fire Department. KT1K with the Babson College Public Safety Department. KA1NFH coordinated the landing site for the helicopter. First mobiles to check in were N1ADY and N1DDI who were assigned to monitor traffic flow at strategic intersections. N1DEZ was a fixed station and told to go to various local repeaters (.64, .82) and seek mobiles who could report traffic flows.

KZ1D was providing communications assistance to Babson Public Safety and helped to coordinate the arrival of Milton's Aux Fire Emergency lighting unit at the landing site.

By 6:15 p.m. the landing site was ready with units from Wellesley Police, Wellesley Fire, Needham Police, Milton Fire and Babson College Police standing by. A switch to a tactical simplex frequency was implemented and all units could make necessary communications.

Right on time at 6:30 p.m. the Boston Med Flight helicopter was visible in the air overhead. Touch down was shortly thereafter, and the SET officially ended with net control dismissing all check in at 6:48 p.m.

A display of the helicopter and slide presentation followed the landing.

In addition to the stations mentioned above, the following stations participated by checking in: N1COY, N1DIZ, KA1IKK, KA1IU, KB1PX, WA1ZJJ, WA2VST, and WD6ERJ for a total of sixteen stations participating. 13 were mobile or were on non-commercial power.

FROM THE MAILBAG

Mr. Arthur Thompson,
Communications Officer

Dear Art,

On behalf of the Town I would like to thank you and the members of the Wellesley Amateur Radio Society who stood by during Hurricane Gloria. The fact that the storm situation did not require extensive use of your personnel in no way detracts from the val of their services.

Knowing that additional communication capability is available for if needed is a valuable aid in planning for an emergency.

Please communicate my thanks to the membership. I look forward to working with you in the future.

Very truly yours,
Stephen A. Black
Fire Chief-Civil Defense Director

It Seems to Me...

by Jim Hatherley, WA1TBY

At 0250 hours on October 10th I was driving home from work along Soldiers Field Road in Brighton. Opposite the site of the MDC swimming pool, not too far from the bridge going over the Charles River to Watertown, my headlights picked up a man lying face down in the middle of this dimly piece of

roadway. He had been knocked out of his shoes which were lying in the road further back.

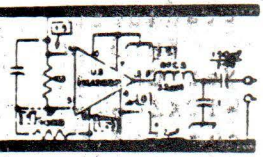
I pulled over to the side of the road and put on my parking blinkers, grabbed a flashlight and my walkie and ran over to the fellow. He had a pulse and had blood around his head area. Not a soul was in sight except me. I hesitated to back up my car in order to shield him from any oncoming traffic for fear that someone would be coming along at high speed and never see him until it was too late to stop. So I made the decision to drag him off the road. Once I had done this I tried to call the MDC on the autopatch...it didn't work...horrors!! So I tried flagging down cars with my flashlight, seeking their help but they just flew by. Finally one fellow did stop and went to a nearby motel to call the police who arrived on the scene and took care of things from there. By this time the fellow had regained consciousness and the police are better able to handle this sort of thing than I, so I gave them my name and phone number and came home.

But the question in my mind was, "Why didn't this autopatch thing work when I needed it?" "Had I used it incorrectly?" "No, I keep a list of these numbers on the sun visor in my car so I can refer to them if needed." "What happened that it had let me down?" All these thoughts were going through my head and I thought that perhaps I should pass on this experience to you by going over how to use this system, should th occasion arise.

First of all, that particular number for the MDC was not working. WB1BUM and I tried it later on in the day. It did work when we dialed C.J.'s number. He promised he would go through all the numbers to be sure they were working numbers. We then went over the procedure for using the patch. If you need to contact an agency in an emergency, look up the proper number, identify your station, holding down your mike key for about a second for each digit dialed and then listen, you should be getting through to your number. If you are not familiar with the code numbers, or how to clear the patch, it would be wise of you to contact our club officers regarding this. I would also like to see all of you make a few 'dummy' runs to familiarize yourselves on how to use this system properly. Believe me, it is no fun learning how during a true emergency such as that mentioned above.

And finally, when you have all the code numbers and how to clear the patch, put a copy of it in your car for easy access. You never know when you'll be needing it in a hurry.

Tek Tok



A Simple Memory Saver

by Erik Thoresen, K1OGF

After seeing the many batteries taped to transceivers with electrical tape and brackets to retain memory, I decided to analyse the problem and make it a little simpler and neater.

The equipment I use stays in the shack about 99.99% of the time, so I decided on an AC auxillary power supply for backup. (A battery could be used too.)

For this project I selected a fast recovery Schottky diode which was designed for low r.f. interference. In my case I used the 1N3891 (200 VRRM, 12 A. Io).

Using two of these diodes in a steering/switching arrangement as shown in Figure 1 seemed the way to go. But problems occurred! Having the auxillary power supply on all the time and then turning on the main power supply to use my rig resulted in competition between the main 10 amp power supply and the 100 ma. auxillary power supply to supply current to my rig. Needless to say the 100 ma. supply was not adequate.

A few minutes of pondering the problem resulted in decreasing the auxillary power supply voltage about two volts. This seemed to work!

After switching the main power supply on and off, and the rig on and off a great many times, I occasionally lost the memory.

A few HOURS of pondering this problem and I decided that a capacitor across each diode was needed to integrate the switching mechanism. Various electrolytics caused problems, even 1 uF. I used smaller and smaller capacitors until it worked good, the result was the use of a .01 uF disk capacitor.

This device has been in use for about a year and a half with no problems at all.

Looking at Figure 1, CR2 supplies current from the auxillary power supply, which is at about 10 volts, to the transceiver at all times to maintain the memory. When I switch on the main power supply CR1 supplies current as it is set at about 13.5 volts. With the buss voltage now at 13.5 volts CR2 is reverse biased and all current is drawn from the main power supply. (Everything is referenced to a common ground buss.) The capacitors assure a smooth switch-over from the main supply to the auxillary supply.

Figure 2 is a pictorial of the device as I constructed it.

CAUTION: Make sure you insulate properly to prevent shorts. The TEFLON sleeving I used is a minimum precaution. Make sure the grounds in each piece of equipment can be tied together, i.e., watch out for floating supplies and remote sensing supplies.

Public Service

by Tom Kinahan, N1CPE

On Saturday, October 12, at least thirty nine Amateur Radio operators assisted in the search for a missing Wayland girl, Sarah Pryor. Friday night, television news programs were headlined by the story of the missing girl and volunteers were asked to help in the search Saturday. Announcements were made on many of the local repeaters, traffic nets and on packet radio bulletin board systems that all available Amateurs should report to Wayland to assist with communications for the search.

At the designated time of 10 a.m., volunteers were starting to show up by the thousands. Amateurs were asked to report to the Wayland High School and all the volunteer searchers were bussed to a local church after leaving their cars at area parking lots.

The talk in to the area was on the Waltham 146.64 and the Weston 146.82 repeaters. A list was made of who was there and what equipment people had. Then as the command post was getting organized at the Wayland Police station where both N1DIB and KB1PA were, other hams were then sent to the First Lutheran Church on Rt. 126 where the field operations post was set up by N1CPE.

After some initial confusion, as is usually the case, there was a ham assigned with each search party of 50 to 80. Because of the size of the groups and the number (about 20), CB radios were used to communicate among the group and Amateur 2 meter radios were used to communicate among the groups and to the command post.

Most of the traffic handled on 2 meters was of directions of where to go and making sure certain groups searched the right places and coordinating the busses to pick up the searchers when they were done. Few clues were found to determine the whereabouts of the missing girl.

The main repeater in use at this time was the 146.22/82 Weston repeater and the level of traffic on there was getting very large. A secondary communications link to the Police station was set up on the Waltham 444.05/449.05 repeater between the field operations post and the command post at the police station.

After about 3 p.m., the groups had started to return to the Church and

FIG. 1

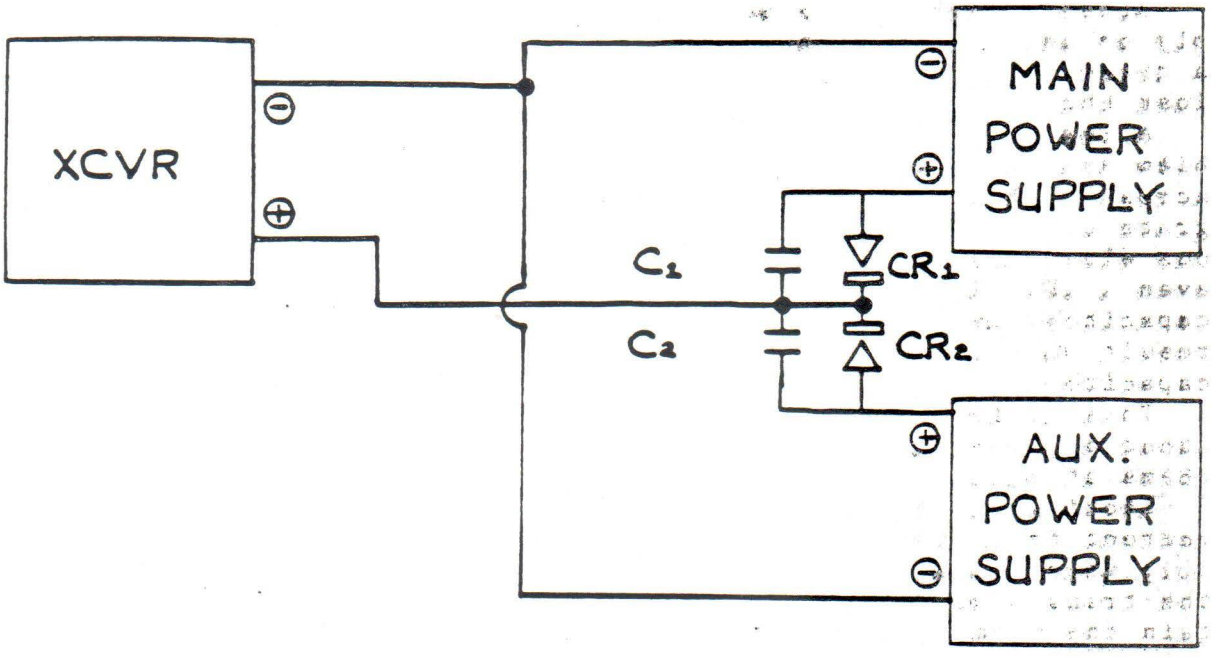
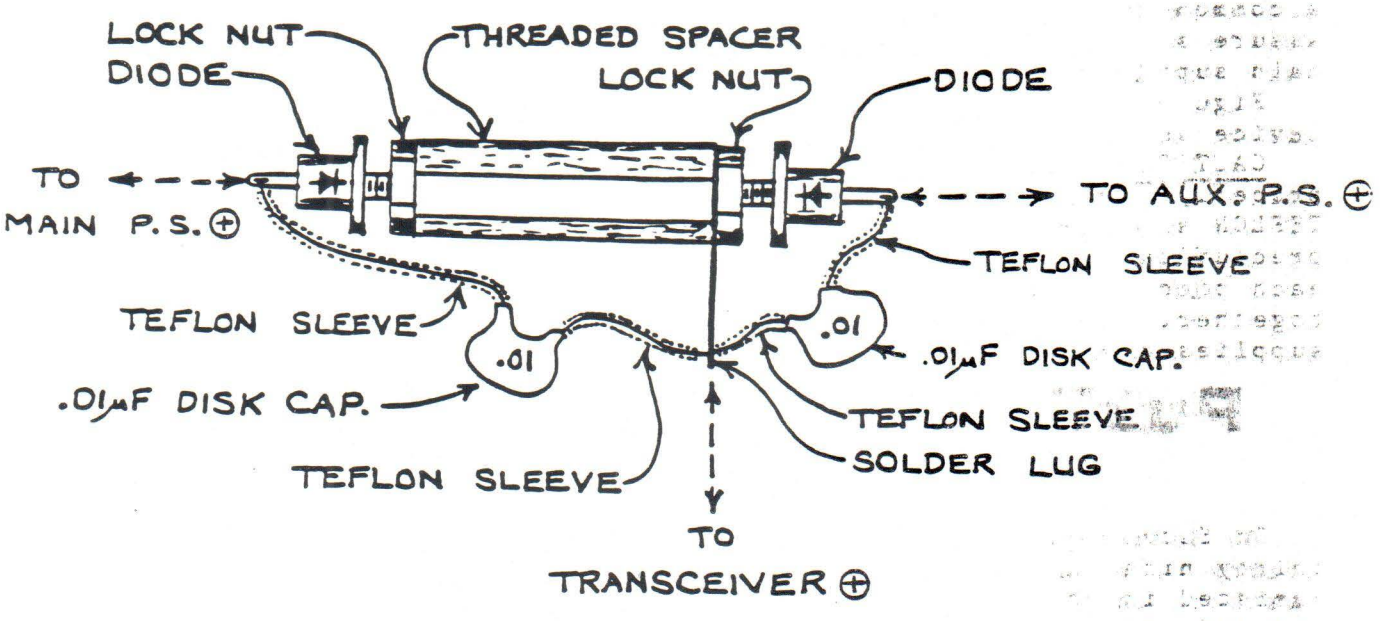

XCVR
⊖
⊕
MAIN
POWER
SUPPLY
C1
CR1
C2
CR2
AUX.
POWER
SUPPLY

FIG. 2


LOCK NUT
DIODE
THREADED SPACER
LOCK NUT
DIODE
TO
MAIN P.S. ⊕
TO AUX. P.S. ⊕
TEFLON SLEEVE
TEFLON SLEEVE
.01
.01
.01μF DISK CAP.
.01μF DISK CAP.
TEFLON SLEEVE
SOLDER LUG
TEFLON SLEEVE
TO
TRANSCEIVER ⊕

were fed a healthy lunch of bologna sandwiches. At this point people were encouraged to go home as the morning groups seemed difficult to manage.

Of the approximately 2000 volunteers that day, about 200 returned to the field searching some places that were missed earlier in the day. There were a few tense moments when items of clothes and footprints were found but nothing found was linked to the missing girl. When it started getting dark, the searchers returned to the church. It was determined that there would not be a large a scale search the next day.

We learned that in an operation of this sort, it is best to put a radio operator with every key official. In this case, The Chief of Police, the 2 key Red Cross leaders, and some of the important vehicles had hams assigned to them. Where so many people are trying to make contact we found that it is essential to have some separate channel to communicate among the major command points. In fact, it would have been much better to have 2 net controls on two different frequencies.

Throughout the day, at least 39 Hams were used from all over New England and there was nothing but praise for the Amateur Radio communications.

It felt good to be among the thousands of people participating in the search for the missing girl, but we were all left saddened that we really couldn't come up with any clues as to where she might be.

Hamnews

The first mobile to mobile QSO over the AMSAT OSCAR 10 satellite took place on August 19 at 1600 UTC. According to Pat Gowen, G3IOR; G4CUO worked G3PXT in a single sideband QSO over the bird. Both stations were running less than 10 watts effective radiated power but were able to exchange S-6 reports. They were later joined by W4BE and WA2RDE to make the event a 4-way.

Westlink Report, September 20, 1985

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Bethany Wait, KI4QV, may be youngest Extra Class license holder in the United States. The 12 year old 7th grader became an Extra at the recent Greater Jacksonville Hamfest in Florida.

No newcomer to Amateur Radio, Bethany obtained her Novice ticket when she was only 8 years old. After studying for the better part of a year, Bethany passed her Extra Class written test on August 3 with flying colors. Tnx Florida Skip.

Westlink Report, October 18, 1985

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From the ARRL/VEC office comes this reminder for all ARRL-accredited Volunteer Examiners: don't forget that the thirty day wait rule remains in force until November 8. After November 8, each VEC entity may set its own waiting period. Once the ARRL Board has determined the cost impact of this rules change, ARRL/VEC VEs will be advised as to what the ARRL/VEC retest policy will be.

ARRL Letter, October 10, 19

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Nineteen days after the U.S.-Jap reciprocal operating agreement to effect, September 26 saw five individual staiton licenses issued to U.S. Amateurs, effective October 1: 7J1AAA was issued to AH0A, 7J1AAB to NA2Y, 7J1AAC to KH2AC, 7J1AAD to WA4PRF, and 7J1AAE to AI0D. Full information for operating in Japan under the new arrangement is available from ARRL Headquarters.

ARRL Letter, October 10, 1985

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NASA has announced the Ron Parise, WA4SIR, is scheduled to be a member of the crew for the Astro 1 shuttle mission, 61E, in March 1986. Astro 1 is the first of three related astronomy missions. Ron is an active AMSAT member, and there is a possibility of Amateur Radio operation from the shuttle once again being approved by NASA.

ARRL Letter, October 10, 1985